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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,243	09/09/2003	Keren O. Perlmutter	16406-004001	4053

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EXAMINER

JOHNS, ANDREW W

ART UNIT PAPER NUMBER

2621

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,243

Applicant(s)

PERLMUTTER ET AL.

Examiner

Andrew W. Johns

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34 is/are allowed.
- 6) ☒ Claim(s) 1,2,20,24,35 and 38-51 is/are rejected.
- 7) ☒ Claim(s) 3-19,21-23,25-33,36 and 37 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/8/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

5 A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10 (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the
15 international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 20, 24, 35 and 38 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ishizawa et al. (US 5,781,666 A).

20 With respect to claim 1, Ishizawa et al. teaches a method of reducing differential resolution (see the Abstract, lines 4-10), the method comprising: selecting a first image containing first information about a scene (i.e., binary-coded image information; column 6, lines 34-37); selecting a second image containing second information about the scene (i.e., color image information; column 6, lines 37-40), wherein a portion of the first image and a portion of
25 the second image have differential resolution (the color image has a resolution of 100 dpi; column 6, line 40; while the binary-coded image has a resolution of 400 dpi; column 6, line 37; so that the images have a differential resolution); determining a location at which to modify a property of the first image to reduce the differential resolution, the location being in the portion of the first image (column 11, lines 30-32; a 4x4 array of the binary-coded image), and the
30 determination being based on information obtained at least in part from the portion of the second

image (column 11, lines 32-34; i.e., the center pixel in a 3x3 array of the color image that corresponds to the array from the binary-coded image); and reducing the differential resolution by modifying the property at the determined location in the portion of the first image (column 11, lines 44-53; colors are assigned to the pixels of the binary-coded image in accordance with the colors of the color image, to produce a high resolution color image without any differential resolution; see Figure 11(A), for example).

Ishizawa et al. further teaches that the images are digital images (i.e., one bit per pixel for the binary-coded image; column 6, line 36; and 24 bits per pixel for the color image; column 6, line 39), the location comprising a pixel (column 11, lines 30-34), and the property comprises an intensity value or a function of the intensity value of the pixel (i.e., the color value of the pixel; column 11, line 66 through column 12, line 6), as further required by claim 2; and that the first image comprises an image that has been modified with information obtained from the second image (as illustrated in Figure 11(A), the binary-coded image is modified using the color information from the color image), as stipulated by claim 20; and that the location is determined automatically (column 11, lines 30-34 and 48-53), as set forth in claim 24.

With respect to claim 35, Ishizawa et al. teaches an apparatus (shown generally in Figure 1) comprising a computer readable medium having instructions stored thereon (i.e., programs; column 6, lines 11-12) that when executed by a machine result in at least the following: selecting a first image containing first information about a scene (i.e., binary-coded image information; column 6, lines 34-37); selecting a second image containing second information about the scene (i.e., color image information; column 6, lines 37-40), wherein a portion of the first image and a portion of the second image have differential resolution (the color image has a resolution of 100 dpi; column 6, line 40; while the binary-coded image has a resolution of 400 dpi; column 6, line

37; so that the images have a differential resolution); determining a location at which to modify a property of the first image to reduce the differential resolution, the location being in the portion of the first image (column 11, lines 30-32; a 4x4 array of the binary-coded image), and the determination being based on information obtained at least in part from the portion of the second
5 image (column 11, lines 32-34; i.e., the center pixel in a 3x3 array of the color image that corresponds to the array from the binary-coded image); and reducing the differential resolution by modifying the property at the determined location in the portion of the first image (column 11, lines 44-53; colors are assigned to the pixels of the binary-coded image in accordance with the colors of the color image, to produce a high resolution color image without any differential
10 resolution; see Figure 11(A), for example).

Finally, Ishizawa et al. further teaches that the apparatus include a processing device coupled to the computer readable medium for executing the stored instructions (i.e., CPU; column 6, lines 10-11), as additionally stipulated by claim 38.

3. Claims 39-44 and 48-51 are rejected under 35 U.S.C. § 102(e) as being anticipated by
15 Wu (US 6,477,270 B1).

With respect to claims 39-44 and 49-51, Wu teaches an apparatus having stored thereon a resolution-enhanced image (column 4, lines 28-32; the new image 75 is created and saved in a computer). Wu further teaches that the apparatus comprises a computer-readable medium (i.e. a computer file; column 4, lines 30-31), as further required by claim 48. While Wu fails to
20 describe each of the limitations set forth in claims 39-44 and 49-51 describing the processing used to create the resolution-enhanced image, these limitations fail to patentably distinguish the claimed invention from the prior art. The exact nature of the stored image does not depend upon the apparatus storing it and the nature of the apparatus is in no way dependent upon the details of

the image stored therein. The stored image is analogous to printed matter on a substrate. "Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability." *In re Gulack*, 703 F.2d 1381 (Fed. Cir. 1983). Because there is no necessary functional relationship between the content
5 or nature of the image data and the apparatus for storing it, the exact details of the image data or its generation do not distinguish the apparatus claimed from the apparatus set forth in Wu. Therefore, Wu anticipates the claimed invention.

Claim Rejections - 35 U.S.C. § 103

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all
10 obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 45-47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wu as applied to claims 39-44 and 48-51 above, and further in view of Miyabata et al. (US 5,418,574 A).

20 While Wu meets the basic limitations of claims 39-44 and 48-51, as pointed out more fully above, Wu fails to specifically teach that the apparatus comprise a reel, a video or an optical disc, as variously stipulated by claims 45-47.

Miyabata et al. teaches an apparatus that stores an enhanced image (i.e., compensating for color bleeding; column 1, lines 9-11), the apparatus comprising video (column 1, lines 11-12) or
25 an optical disc (column 1, line 15). Miyata et al. also inherently teaches that the apparatus can comprise a reel, as the video cassette recorders described at column 1, lines 11-12 include reels

to store the tape having the images recorded thereon. Because such video and optical discs are exceedingly common storage devices for image data, it would have been obvious to use such devices to store the image data of Wu, because such devices are readily available and easily useable. Therefore the claimed invention would have been obvious to one of ordinary skill in the art at the time of the invention.

Allowable Subject Matter

6. Claim 34 is allowed.

7. Claims 3-19, 21-23, 25-33 and 36-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

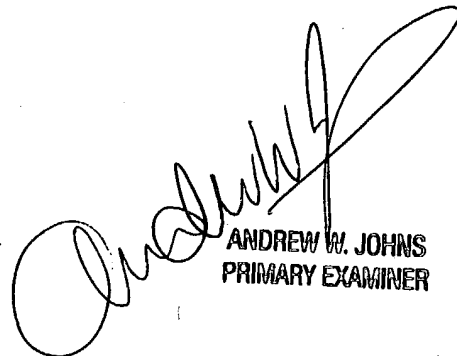
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Johns whose telephone number is (703) 305-4788. The examiner is normally available Monday through Friday, at least during the hours of 9:00 am to 3:00 pm Eastern Time. The examiner may also be contacted by e-mail using the address: andrew.johns@uspto.gov. (Applicant is reminded of the Office policy regarding e-mail communications. See M.P.E.P. § 502.03)

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached on (703) 305-4706. The fax phone number for this art unit is (703) 872-9306. In order to ensure prompt delivery to the examiner, all unofficial communications should be clearly labeled as "Draft" or "Unofficial."

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center Receptionist whose telephone number is (703) 305-4700.

A. Johns
8 November 2004



ANDREW W. JOHNS
PRIMARY EXAMINER